

CLAIMS

1. A signal amplifier, characterized by comprising a pre-stage circuit for inputting a signal from an external device and a post-stage circuit for amplifying the signal fed from the pre-stage circuit and outputting the signal therefrom, wherein:

input impedance of the pre-stage circuit and output impedance of the post-stage circuit are set to match external impedance in a one or more-digit frequency range; and

output impedance of the pre-stage circuit and input impedance of the post-stage circuit are set to match at impedance lower than the output impedance of the post-stage circuit.

2. A signal amplifier in accordance with claim 1, characterized in that:

the post-stage circuit includes a traveling-wave amplifier.

3. A signal amplifier in accordance with claim 1 or 2, characterized in that:

the pre-stage circuit includes an impedance transforming circuit.

4. A signal amplifier in accordance with claim 3, characterized in that:

the impedance transforming circuit comprises a traveling-wave amplifier.

5. A signal amplifier in accordance with claim 3, characterized in that:

the impedance transforming circuit includes an emitter-follower circuit or a source-follower circuit.

6. A signal amplifier in accordance with claim 3, characterized in that:

the impedance transforming circuit includes a differential circuit.

7. A signal amplifier in accordance with one of claims 1 to 6, characterized in that:

an output section of the pre-stage circuit is connected via a capacitor to an input section of the post-stage circuit.

8. A signal amplifier in accordance with one of claims 1 to 7, characterized in that:

the pre-stage circuit and the post-stage circuit are formed on the same substrate.